

grasshoppers and other cryptically coloured insects from long grass''. In the course of a visit to the north end of Lake Rudolf (Kenya) in February 1964 I saw Carmine Bee-eaters using Kori Bustard, Burchell's Zebra, Topi and Grant's Gazelle as perches. I am convinced that this behaviour was not for lack of other perches—there were plenty of bushes and trees about—but because they are developing Cattle Egret, *Bubulcus ibis* (Linnaeus) habits *i.e.* they were constantly swooping down to catch insects disturbed by their 'hosts' and then returning to their perch. It was noticeable how they refrained from perching on Oryx, presumably because they could be swept off by the long horns. The Marsabit Game Warden told me that he has also seen the Carmine Bee-eater perching on the long-necked Gerenuk, sometimes called the Giraffe-Gazelle. One party of seven Topi I saw all had Carmine Bee-eaters on their backs, as many as a total of nine at a time.

On the other hand I have never observed similar habits, nor I believe has anyone else, in the Southern Carmine Bee-eater, *Merops nubicoides* Des Murs and Pucheran, a bird with which I was familiar for many years in Northern Rhodesia where it nested in colonies of many hundreds in the Loangwa Valley and seasonally occurs throughout most of the country.

According to Praed and Grant (1962) "Has the habit of following man or game for the insects they disturb and comes freely to grass fires", but Roberts (1958) does not refer to any association with man or game, though he does mention, in connection with the search for insect prey, "flying about at some height often near bush fires".

References:

- Mackworth-Praed, C. W. and Grant, C. H. B. (1962). *Birds of the Southern Third of Africa*.
Roberts, Austin. Revised Edition (1958). *Birds of South Africa*.

A new subspecies of Pink-billed Lark, *Calandrella conirostris* from Barotseland, Northern Rhodesia

by C. W. BENSON

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During a collecting tour in Barotseland, from 19th November to 5th December, 1963, on behalf of the Rhodes-Livingstone Museum, I spent a day on the Matabele Plain, in the Senanga District, where five specimens of *Calandrella conirostris* (Sundevall) clearly representing a previously undescribed subspecies were collected:—

Calandrella conirostris harti, subsp. nov.

Description: Altogether paler than *C. c. makawai* Traylor (1962), the feathers of the upper side margined with grey rather than pinkish buff, the fawn of the under side less rich. Somewhat richer fawn below than *C. c. crypta* Irwin, and decidedly darker above, the centres of the feathers blacker; their margins greyer. In fawn coloration of under side closest to *C. c. barlowi* (Roberts), but slightly more pinkish in tone than in that subspecies, and at once distinguishable on upper side in being grey rather than rufous, the dark central stripes of the feathers as in *barlowi* being reduced.

Distribution: Apparently confined to Matabele Plain, Barotseland.

Type: Male, in the Rhodes-Livingstone Museum, shot by Jali Makawa

for C. W. Benson, on the Matabele Plain, Barotseland, Northern Rhodesia, at 16° 26' S., 23° 10' E., 1st December, 1963. Collector's number NR 12956, R.-L. Mus. Reg. No. 5001.

Measurements of type: Wing 75, tail 41, culmen (from base) 10, tarsus 20 mm.

Material examined: On this same tour I spent 22nd November on the Liuwa Plain with R. K. Hart, where he shot for me a specimen of *makawai*. On returning to Livingstone and unpacking the collection, differences between this specimen and those from the Matabele Plain were at once apparent, to my surprise. One of the latter was sent to Major M. A. Traylor for comparison with the type and topotypes of *makawai* from the Liuwa Plain in the Chicago Natural History Museum. He confirmed the well marked differences between the two subspecies.

The Matabele Plain material has been compared with that of the species in the National Museum, Bulawayo. Of seventeen specimens of *crypta*, from Lake Dow and the Makarikari Salt Pan, eastern Bechuanaland, several collected in January are in fresh dress, but like the remainder are easily distinguishable from the Matabele specimens, also in fresh dress. Nine specimens of *barlowi*, from southern Bechuanaland, and one each of *transiens* and nominotypical *conirostris*, were also available.

Remarks: That different subspecies should have evolved on the Liuwa and Matabele Plains can be explained from an inspection of the map in Trapnell *et al.* (1948). This shows that both these plains consist of Kalahari sand plain grasslands isolated from each other by nearly 100 miles, such grasslands being absent in the intervening area. Traylor (1962) suggests that the dark colour of *makawai* may be a response to increased humidity. This seems to be borne out by *harti*; darker than *crypta* but paler than *makawai*, and the annual rainfall mean on the Matabele Plain may be appreciably less than on the Liuwa Plain, an inspection of the rainfall map in Brelsford (1960) showing that the former lies between the 24 and 28 inch, the latter the 36 and 40 isohyets.

Harti was common in twos and threes on the drier parts of the plain. Not a single *Calandrella cinerea* was noticed, and this species appears to be largely a migrant, only normally present in Northern Rhodesia during the dry season. But the presence of *conirostris* on the Matabele Plain on 1st December, after the start of the rains, suggests that it is resident, and helps to explain the subspeciation which has occurred.

To the list of subspecies of *Calandrella conirostris* in White (1961) (see also *Ostrich*, 33 (1), 1962: 13, agreeing) there must now be added the two from Barotseland, *makawai* and *harti*. The latter is named after R. C. Hart, son of R. K. Hart. He has collected many specimens which are now in the Rhodes-Livingstone Museum in the Kalabo District of Barotseland. I am grateful to M. P. Stuart Irwin for making available the material of *Calandrella conirostris* in the National Museum, Bulawayo. He agrees with me in recognising this new subspecies. I must also thank C. S. Holliday for seconding skinner Aaron Muchindu for my tour.

References:

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Trapnell, C. G. *et al.* 1948. *Vegetation-soil map of Northern Rhodesia*.
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